What Have We Learned Since Fukushima?

March 13—March 11 was the second anniversary of the massive 9.0 earthquake and tsunami on the east coast of Japan, north of Tokyo. On that day, some 18,000 people lost their lives, almost all from the awe-inspiring tsunami that washed miles inland, destroying roads, cars, buildings, and people. There were two, and only two, deaths to date at the Daiichi Fukushima nuclear power station. They were both Tokyo Electric Power Company employees doing maintenance work, who were crushed by the rushing water before there was any accident at the power plant or release of radioactivity.

This natural catastrophe was immediately used to promote a huge wave of irrational propaganda against nuclear power, leading the Merkel government of Germany, in particular, to rush away from that power source, in spite of the costs. Hair-raising scare stories made the rounds about the risks of death and illness from the effects of "out-of-control" nuclear radiation.

Studies Prove the Greenies Wrong

What do we know today? Two recent studies, one by the Japanese government and the other by the World Health Organization (WHO), have reached similar conclusions: "The predicted risks are low, and no observable increases in cancer rates above baseline rates are anticipated," concluded the WHO Feb. 28, 2013 report. The Japanese scientists found an average radiation dose of well under 1 millisievert, whereas a 1 millisievert dose would increase the cancer risk for 10,000 people from 3,500 expected cases over a lifetime to 3,502 according to the "generally accepted" (but flawed) low-dose statistical model. The highest effective dose measured was only 1.07 millisieverts. Background radiation from natural sources such as radon gas is typically around 2 to 3 millisieverts per year, while medical applications, such as chest X-rays CT scans of the heart can produce 0.1 and 16 millisieverts, respectively.

Another study, carried out by the Japanese Environmental Ministry and released last week, found that the *thyroid abnormalities in children from Fukushima Prefecture are actually lower than elsewhere in the country*. The study was conducted after screaming headlines announced in February that more than 40% of some 133,000 children living there, aged 18 and under when the disaster occurred, were diagnosed with small lumps or cysts on the thyroid, all believed to be too small to be of concern. The Ministry thus decided to conduct tests for comparison, using the same devices and the same age group, in three cities far removed from Fukushima. There, the percentage of those diagnosed with small cysts or lumps was 56.6%, *as opposed to 41.2% in Fukushima.* Larger cysts and lumps, requiring follow up, were found in another 1.0% of the control group, against 0.6% in Fukushima.

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Despite the anti-nuclear hysteria whipped up by the greenie-infested mass media, as in this September 2011 mass rally in Tokyo, studies show that there were "no observable increases in cancer rates," and in fact, that low-level radiation is beneficial.

Benefits of Low-Level Radiation

Note that thyroid abnormalities were *lower* for people near the plant. They were exposed to more low-level radiation than in the general population, pointing to the beneficial effects of low-level radiation, known as hormesis.

Enviromentalists have made a living, and the Environmental Protection Agency has enforced regulations, under the false idea that *any* amount of radiation is harmful, denying that hormesis exists, using a flawed statistical model, the no-threshold, linear extrapoliation method: If a lot of radiation is very bad for you, less radiation is also bad, just less bad, when in fact it can be beneficial.

Readers can find elaboration of this in an article in the upcoming Spring 2013 issue of *21st Century Science & Technology* by Dr. Edward Calabrese, a leading expert in the field, on how this environmental sabotage has led to unnecessary deaths, by denying patients the benefits of low-level radiation.

On the first anniversary of the tsunami, the Health Physics Society of the U.S. estimated, as published in *The Lancet*, Britain's major medical journal, that "the risk of developing cancer for those exposed in Fukushima will increase by about 0.002%, and the risk of dying from the disease would rise by 0.001%." For the approximately 100,000 evacuated, the lifetime risk of cancer is about two cases with a single fatality, even according to the low-dose radiation statistical model, which does not take into account the beneficial effects of low radiation.

However, as a *Yomiuri Shimbun* newspaper article noted, there were many fatalities due to "the psychological trauma associated with evacuation, and the aggravation of existing chronic conditions such as pneumonia and heart disease." Indeed, fueled by media hysteria, the evacuation measures were drastic and rushed, on frantic orders of then-Prime Minister Naoto Kan, who actually came close to ordering what would have been the deadly, disasterous attempt to evacuate the entire Tokyo metropolitan area of more than 30 million people.

The foremost logical (as opposed to ideological) lesson to be learned from the massive tsunami which shut down the electrical supply to Daiichi Fukushima is that priority should be given to investing in the development of the technologies needed for forecasting such natural events as earthquakes and tsunamis.